

Claims

1. Apparatus for applying fluid to a substrate, in particular for glueing inner books, wherein the substrate is movable in a principal direction of movement relative to the apparatus, and said apparatus comprises a first slot nozzle connectable with a fluid source for applying a fluid film onto a side of the substrate to be coated, characterized in that the first slot nozzle includes sealing means for adjusting the width of the first slot nozzle outlet transversely to the principal direction of movement of the substrate.
2. Apparatus according to claim 1, additionally comprising a second slot nozzle, connectable with a fluid source, for applying a fluid film onto the side of the substrate to be coated that lies opposite the side coated with fluid by the first slot nozzle.
3. Apparatus according to claim 2, characterized in that the second slot nozzle comprises sealing means for adjusting the width of the second slot nozzle outlet transversely to the principal direction of movement of the substrate.
4. Apparatus according to claim 1, further comprising a third slot nozzle, connectable with a fluid source, for applying a fluid film onto the back surface of the substrate to be coated, in particular the back surface of an inner book.
5. Apparatus according to claim 4, characterized in that the apparatus is also an apparatus according to one of claims 2 or 3.
6. Apparatus according to one of the preceding claims, characterized in that the first and/or second slot nozzle is movably mounted for adjusting the gap between the first and second slot nozzle.

7. Apparatus according to one of the preceding claims, characterized in that the first slot nozzle and also the second slot nozzle, if present, is adjusted to contact the substrate to be coated.
8. Apparatus according to one of the preceding claims, characterized in that the sealing means projects out of the plane of the first nozzle outlet and/or the plane of the second nozzle outlet in the direction of a substrate to be coated, in order to limit the thickness of the fluid film applied by the respective slot nozzle onto the substrate.
9. Apparatus according to one of the preceding claims, characterized in that the first slot nozzle and/or second slot nozzle, if present, and/or third slot nozzle, if present, comprise(s):
  - a fluid passageway extending across the entire width of the slot nozzle,
  - a piston that is movable in the fluid passageway to seal the latter, and
  - a sealing body extending within the plane of the slot nozzle outlet, wherein the piston and the sealing body co-operate to adjust the width of the slot nozzle outlet transversely to the principal direction of movement of the substrate.
10. Apparatus according to one of claims 5 – 9, characterized in that the width of the third slot nozzle outlet is limited by the gap between the first and second slot nozzle.
11. Apparatus according to one of the preceding claims, additionally comprising a clamping device for holding the movable substrate.

12. Apparatus according to claim 11, additionally comprising lifting means for moving the first and/or the second and/or, if present, the third slot nozzle in the direction of the clamping device.
13. Apparatus according to one of the preceding claims, additionally comprising a control device that communicates with the first slot nozzle and/or any second and/or any third slot nozzle and with a device for recognizing the end of a substrate, in order to control the flow of fluid out of the slot nozzle or nozzles depending on the presence in the area of the slot nozzles of a substrate to be coated.